DOCUMENT RESUME

ED 171 179 HE 011 142

TITLE	Project Advance: College Courses in the High School.
INSTITUTION	Syracuse Univ., N.Y. Center for Instructional Development.
PUB DATE	78
NOTE	27p.
AVAILABLE FROM	Center for Instructional Development, Syracuse University, Syracuse, NY 13210
EDRS PRICE	MF01/PC02 Plus Postage.
DESCRIPTORS	Academic Standards; Acceleration; *Advanced Programs; College Bound Students; College Curriculum; *College School Cooperation; *Cooperative Programs; Higher Education; *High School Students; Secondary Education; *Student Characteristics; Teacher Selection; Teacher Workshops
IDENTIFIERS	*Project Advance; *Syracuse University NY

ABSTRACT

Information is presented on Project Advance, a cooperative program between Syracuse University and participating high schools that allows high school seniors to take regular college courses in their own school and at low cost. The illustrated booklet contains descriptions of the program in general, selecting and training of teachers, maintaining college standards, some limitations of the program, and information on the students. Course descriptions, a list of participating high schools and course offerings for 1978-79, resume information for Project Advance faculty and administrative staff, and a bibliography of research reports and publications are also provided. (SW)

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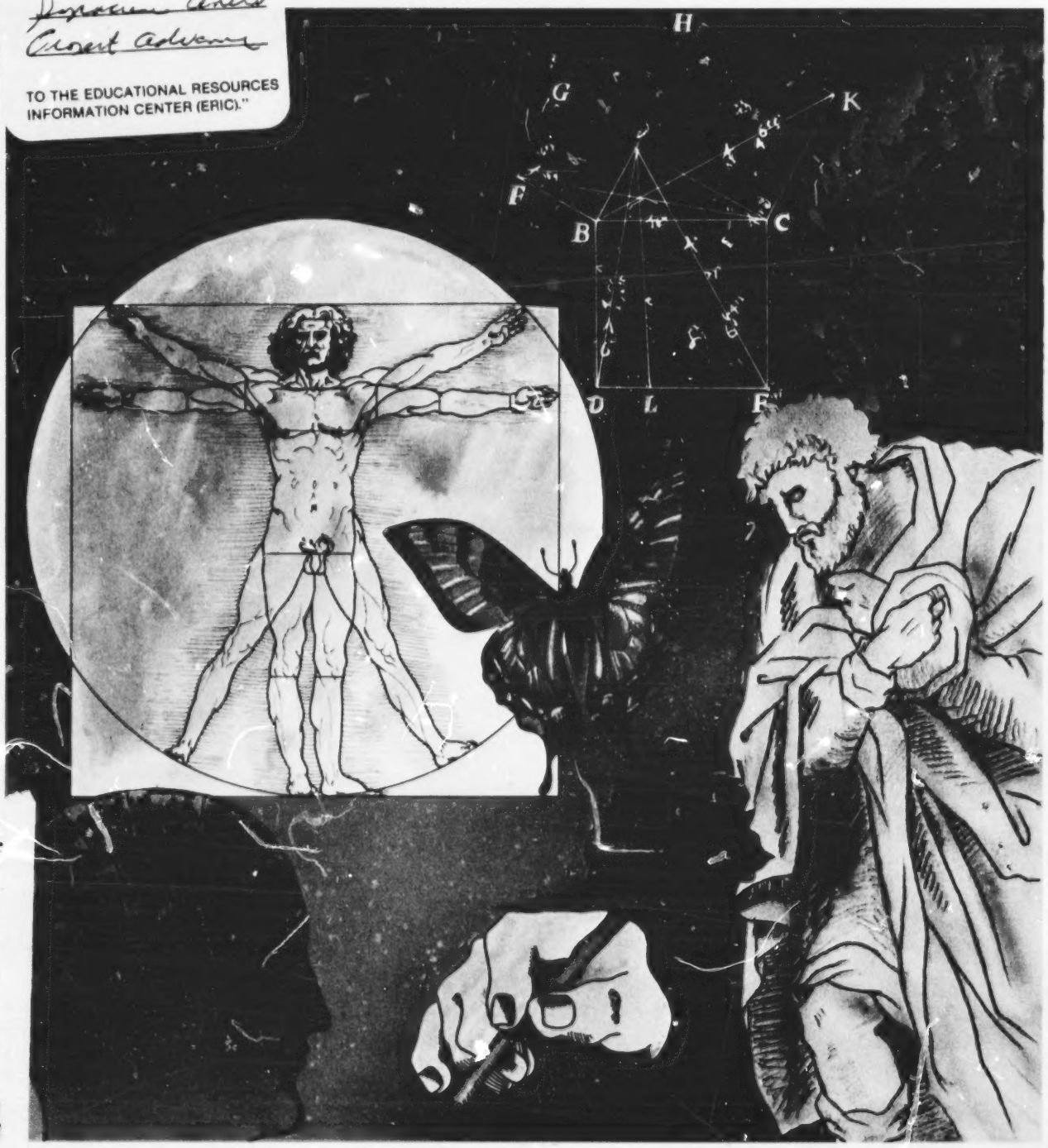
College Courses In The High School



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Project Advance

COLLEGE COURSES IN THE HIGH SCHOOL

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What Project Advance Is All About

What is Project Advance?

Project Advance is a cooperative program between Syracuse University and participating high schools. It allows high school seniors to take regular college courses in their own school and at low cost. The courses are taught by carefully selected high school faculty who attend special Syracuse University workshops and seminars, are trained by regular Syracuse University faculty members, and who are subsequently designated, if qualified, as adjunct instructors of Syracuse University. Under the supervision of Syracuse University faculty, these adjunct instructors may then teach the course as part of their regular teaching load. The courses are carefully monitored by Syracuse University faculty and Project Advance administrative staff in cooperation with the high school teacher to ensure that the standards maintained in the Project Advance courses offered in the high schools are identical to those for the same courses taught by the Syracuse University faculty on campus. With few exceptions, high school faculty have undergraduate and graduate degrees in the subject area plus a minimum of five years' teaching experience specifically in the area of the subject to be taught (see page 6).

Students who successfully complete their Project Advance course work are entitled to a regular Syracuse University transcript. The credit earned by the student can be transferred to most colleges and universities around the country. Currently, 316 of 331 colleges and universities approached by Project Advance graduates in the past four years have accepted the transfer of Project Advance course work for degree credit and/or exemption from similar courses. A complete listing of these is available on request from Project Advance.

How large is the program?

Project Advance currently is the largest program in the United States offering in the high schools regular college courses for credit, taught by high school faculty. The growth of the program has been dramatic. Initially implemented in 1973 in six pilot schools in the Syracuse area, Project Advance now serves 80 high schools and approximately 4,000 students throughout New York and in Massachusetts and Michigan (see page 17).

What courses are offered?

Project Advance currently offers introductory college courses in biology, calculus, chemistry, English, psychology, religion, and sociology. The courses are identical to those offered to Syracuse University students on the home campus. Detailed student and teacher manuals, testing and evaluation instruments, minicourse outlines, and record-keeping instruments have been developed for these courses and undergo continuous evaluation and revision (see page 14).

Course enrollments for the 1978-79 school year further indicate the scope of the program:

1978-79 Course Enrollments

Course	No. of High Schools Offering Courses	No. of students Enrolled
Biology	14	190
Calculus	23	360
Chemistry	3	45
English	67	1,675
Psychology	27	1,315
Religion	1	30
Sociology	16	390
		4,005

Are the courses hard?

Probably the best way to describe Project Advance courses is "challenging and thought provoking." Compared to most high school courses, they go into greater depth, often take more time, require more work, yet provide considerable opportunity for individual progress and accomplishment. As one former Project Advance student said of the English course, "It's hard. But with the stress it puts on writing and composition, it gives you some valuable skills you probably would not learn in a high school course." In short, a Project Advance course makes considerable demands on students' ability to conceptualize, understand hidden meanings, and draw conclusions from their reading and research. This is necessary for students to realize when they register for the course, for parents to understand when their sons and daughters experience more stringent grading

standards than they may be used to, and for colleges and universities to appreciate when considering credit earned in the program. By the same token, it has been our experience that the high school student with a *B* average or better, and the motivation to work hard, can manage—indeed, excel—in a Project Advance course.

How do Project Advance students compare academically with college students taking these same courses on campus?

We have conducted numerous studies over the years comparing the academic performance of students enrolled in Project Advance with that of Syracuse University students taking the same courses on campus. The findings indicate that Project Advance students have performed at least as well as, and, in some instances, better than, their on-campus counterparts (see page 11).

What about the acceptance of Project Advance course work for college credit?

The overwhelming majority of Project Advance students (93%) have successfully transferred their course work credit toward a degree program and/or exemption from similar courses. A complete listing of more than 300 post-secondary institutions that have thus far recognized Project Advance credit is available on request. Also on the list are 15 colleges which currently do not accept Project Advance credit or which accept it conditionally. When possible, the particular school's policies are indicated (see also page 9).

Why should a college be interested in Project Advance students?

Survey and evaluation data indicate that colleges can reasonably expect Project Advance students to:

—perform better academically than their peers
—have a more realistic expectation of the academic demands than their peers
—have a greater initial command of the basic skills of writing and composition
—have available to them a greater number of elective options
—complete their degree program in about the same time as their classmates (one follow-up study indicates that the majority of Project Advance students do not seek time-shortened degrees despite the acquisition of college credit in high school)
—be less likely to transfer or drop out

Thomas Anthony, Dean of Admissions of Colgate University, in commenting on the interest in Project Advance among faculty members at Colgate, offered the following:

We were confronted about a year ago with 18 or 19 various school-college cooperative programs. Naturally, there were a lot of questions in our mind about their legitimacy and how we'd establish viability for credit. . . . We brought Project Advance people down here to talk with us. The faculty were quite impressed with the seriousness of the Project. We realized students were not taking it in a frivolous way. . . . We were particularly impressed with the math course. We figured it was about as fine a freshman course as a student could find on any campus. So, for us, the validity of Project Advance was established. Basically, our faculty liked the program. Our only reservation is the possibility of unevenness from school to school. Otherwise, we feel the program is well designed and well controlled.

Is Project Advance a recruiting agency for Syracuse University?

Definitely not. In fact, Project Advance administrators and faculty go to considerable lengths to ensure the widest transferability of credit to post-secondary institutions throughout the country. Data from Syracuse University Admissions indicate that Syracuse has not experienced increased admission rates from Project Advance students. It has been noted, however, that Project Advance students who do matriculate at Syracuse as a group are academically better students than those who have not participated in Project Advance, and have a lower attrition rate.

What about payments and expenses?

The cost to the student in this self-supporting program is $19 per credit hour (1978-79 tuition rate). The income generated from tuition pays for such items as the salaries of Project Advance administrative staff, as well as the supervisory services of regular Syracuse University faculty members involved with the program, registration and record keeping services provided by the University Registrar, travel expenses incurred in visiting high schools in the program, printing, computer services, and test scoring and evaluation.

The high school bears the expense of an in-service workshop for teachers before implementation of the program, for faculty release time for continuing in-service seminars, as well as any additional cost for texts, instructional materials, and library or laboratory resources. The cost for teacher training per school per course was $450 for the 1978 workshops (a figure often reduced for many districts eligible for BOCES reimbursement). Limited scholarship aid is available for financially needy students through Project Advance and occasionally through local organizations such as Rotary and church groups.

How did Project Advance get started?

Project Advance grew out of the recognition by high school and college faculty of two situations: 1) a duplication of curriculum between the last two years of high school and the first two years of college, and 2) "senioritis," or senior-year boredom, among capable high school students who have completed most of their graduation requirements by the end of their junior year.

In 1972, concerns like these led a group of high school administrators in the Syracuse area to contact Dr. John Prucha, the Vice Chancellor for Academic Affairs at Syracuse University. The problem was turned over to Dr. Robert Diamond, Assistant Vice Chancellor for Instructional Development and Director of the Center for Instructional Development.

After considering most of the alternatives that have usually been employed in school-college programs, i.e., 1) "split-day" programs, in which students divide their time between high school and campus, 2) college courses taught within the school by college faculty, 3) early graduation, and 4) the Advanced Placement Examination Program, it was decided to explore ways in which carefully designed and controlled courses could be taught for credit within the high school by high school teachers as part of the school's regular academic program.

As the idea of Project Advance developed, the rationale for the program was extended and refined. It included the general rationale described earlier: 1) reduce curriculum duplication, and 2) increase challenge to high school seniors. But, in practice, the Project has come to serve perhaps an even more important purpose. It is clearly a proving ground for college-bound seniors, a unique opportunity for them not only to gauge their ability to do college-level work, but also to sharpen their academic and management skills in preparation for college itself. In addition, it has provided college professors and seasoned high school faculty with a continual forum for instructional development in several extremely important content areas.

Selecting and Training Teachers

Project Advance does not automatically accept a teacher into its program. Rather, interested applicants are screened and prepared in accordance with established guidelines and procedures. These are as follows:

1. To introduce the program, key personnel from interested schools first are invited to an orientation seminar in which they are acquainted with Project Advance course designs, associated instructional materials, teacher qualifications, the nature and duration of summer training sessions for teachers, the type of student each course is designed to serve, minimum and maximum class size, teacher load, required facilities, and class scheduling.

2. If, following the orientation seminar, a high school expresses continued interest and has the resources to comply with the requirements of the program, it is then asked to submit applications of interested teachers who appear to have the academic qualifications and teaching experience stipulated by Syracuse University. Principals are encouraged to submit at least three names in each course area in the interests of flexibility in choosing among qualified staff. The applications must be accompanied by letters of recommendation from subject area supervisors and principals, and copies of teachers' college transcripts.

3. Faculty committees from the appropriate Syracuse University departments review the applications for extensive teaching experience in the specific content areas, course work in the content area (sufficient to qualify the instructor to teach at the college or university level), and, in some cases, particular kinds of course work in the teaching of writing. While the criteria and procedures for judging teachers' credentials are established chiefly by Syracuse University, the high school principal remains an important participant in the teacher selection process.

4. After the committees have reviewed teachers' credentials, the high school is notified of its applicants' standing—"approved," "conditionally approved," "not approved"—for participation in the formal preparatory summer workshop.

5. High school teachers and Syracuse University faculty in each content area meet in an all-day orientation in the spring to review the course design, describe the summer training program, and consider pre-workshop activities.

6. The final step before actual implementation of the program is the summer workshop for all participating teachers. Each workshop (usually five to 10 days long) is planned and conducted by the university professors who will supervise the particular course in the high school and teach the course on campus. Emphasis in the workshop is on the adaptation of a campus-designed course to the high school setting. For example, the Syracuse University Freshman English course has design features (e.g., self-pacing, alternative instructional tracks, minicourses, remediation, diagnostic testing) which can be accommodated on campus without much difficulty but which may present problems in a high school setting where one or two teachers may be teaching the course to 25 or 50 students. Finally, workshop participants are required to produce a formal plan of adaptation which must receive Syracuse University approval.

Maintaining College Standards

Project Advance faculty and administrative staff make every effort to ensure that college standards are maintained throughout the program.

Site Visits

At least one day each semester, Syracuse University faculty members and Project Advance administrative staff visit each class, check papers for standards (a folder of all work is kept for each student), talk with the teacher and with the students about the program, and discuss community feelings and the overall administration of the program with the high school principal. They also read papers and tests that students have written for their Project Advance courses to ensure that the grading standards applied are consistent with those set by Syracuse University (see page 10). In addition to site visits, frequent contact is maintained with the high school by letter and telephone. Both school and Syracuse University faculty find that individual school grading is often stricter than the standards required by the University. Baird Whitlock, in *Don't Hold Them Back: A Critique and Guide to New High School-College Articulation Models*, notes the reaction to Project Advance of the teachers at Hauppauge High School:

*The teachers at the school [Hauppauge High School] with whom I spoke usually had experience with more than one of the college programs, so they could make interesting comparisons. Project Advance was deemed the most demanding. The teachers felt it was really an honest program, both for the students and also for themselves because of the interactions they had with the Syracuse people. They were impressed that the visitors read everything in a student's folder. They felt that because the structure was clear, there was a good deal of freedom within it. The principal is very strong on using exactly the same materials that the colleges do and believes that a 40 percent leeway is enough for a teacher to have.**

Semi-Annual Seminars

Syracuse University faculty members meet with the high school teachers in a specific subject area, as a group, once each semester. These meetings are highly collaborative in nature. They enable teachers from different high schools to share with one another and with Syracuse University faculty members their experiences in teaching a Project Advance course, to resolve problems of mutual concern, and to clarify and formulate course-related policies and procedures. They also provide an opportunity to consider new instructional materials and procedures, exchange ideas with guest lecturers, and observe demonstrations.

Course Selection and Development

Project Advance courses have undergone extensive on-campus instructional development, a process that has enabled us to transfer courses to the high school setting without a great deal of difficulty. The organization largely responsible for this has been Syracuse University's Center for Instructional Development, recognized nationally for its work in the development, evaluation, and redesign of college courses. The courses selected for Project Advance thus are college courses identical in every important respect to their on-campus counterparts: the learning objectives, tests, instructional materials, course work, and grading standards are the same, and the course design is comparable. Research and evaluation have shown that Project Advance students perform as well as, if not better than, on-campus students taking the same courses. In other words, universities asked to accept Syracuse University Project Advance credit can be assured that Project Advance students who have earned passing grades in these courses would have earned at least those same grades on campus.

Program Evaluation

A variety of research and evaluation activities reflect our continuing need to assess the effectiveness of instruction in university courses, the maintenance of academic standards, the quality of instructional materials, and the impact of the program upon students and curriculum. Such information is not only vital for continued course improvement but also is necessary for colleges and universities evaluating the university transcripts of participants.

A select bibliography of Project Advance research reports and publications relating to this concern appears on page 24. Individual copies are available on request from Project Advance at a nominal charge.

*Baird Whitlock, *Don't Hold Them Back* (New York: College Entrance Examination Board, 1978), page 103.

Some Limitations of the Program

"What do you mean my daughter is not going to earn any university credit? We paid tuition, didn't we?"

Parent of a Project Advance student

Cooperative programs like Project Advance have special difficulties that must be anticipated.

Transfer of Credit

Approximately 96% of the more than 300 colleges and universities approached by Project Advance graduates in the past have accepted the transfer of Project Advance course work for degree credit and/or exemption from similar courses. A few colleges, however, have policies which preclude transfer. Some institutions, for example, will not recognize:

- —transfer credit from other institutions except under very limited conditions
- —credit earned off campus
- —courses where high school *and* college credit were earned simultaneously, as is the case with Project Advance courses
- —college credit for courses *required* for high school graduation (this may or may not apply to Project Advance courses, depending on high school policy)
- —credit for courses which are not identical to their own.

Unfortunately, most colleges do not have a clear policy statement regarding the transfer of credit acquired through cooperative programs such as Project Advance. Moreover, the fact that a college or university has recognized Project Advance course work in the past does not mean that it has a commitment to do so in the future. Evaluation of Project Advance or any other type of transfer credit is always made on an individual basis, usually in conjunction with a student's high school record. Our experience, in short, is that, although the overwhelming majority of Project Advance students have successfully transferred their course work for credit and/or exemption in the past, college officials usually will not commit themselves to a decision before they have reviewed an official Syracuse University transcript. It should be noted, however, that, in this respect, the Project Advance student is treated no differently from any other student—high school, graduate, or undergraduate—wishing to transfer credits from one institution to another. Insofar as colleges naturally are reluctant to accept credit for courses for which a student has received a poor grade, it behooves students to do their best.

Our experience also suggests that some students have difficulty transferring Project Advance credit simply because they fail to have an official Syracuse University transcript forwarded to the college of their choice soon enough for the college to evaluate the transfer credit.

Nonetheless, those few students whose credit is not accepted may feel that they have been misled. Subsequently, they or their parents may criticize the high school or the program in general. While considerable efforts are made to be heedful of circumstances in the transfer of credit, a combination of changing or ambiguous college policy and differential treatment of students poses a potential community relations problem for the high school.

Impact on Curriculum

Implementing college courses in the high school can sometimes create problems with the high school curriculum. An existing elective, for example, may suffer a sudden drop in enrollment after Project Advance courses are introduced, since the same students who enroll in enrichment courses usually want to enroll in Project Advance courses as well. This situation does not necessarily have to be a problem, however. Many schools simply drop the high school elective and have the high school instructor who teaches it take over the Project Advance course.

Another effect of implementing Project Advance in a high school may be either a problem or advantage, depending on the specific circumstances in the school. Where Project Advance has been introduced, the high schools frequently try to "beef up" their pre-senior-year courses in order to give their college-bound students a better preparation for taking Project Advance courses in their senior year. This adjustment of the high school curriculum can reduce the alternatives for the non-college-bound student, especially in smaller schools which are unable to provide separate curricula for college-bound and non-college-bound students.

Curriculum Coordination

In looking at the catalogs of a great many colleges and universities around the country, one finds that most introductory level courses do not differ substantially in content from one campus to another. However, the sequence of course topics over two semesters may vary considerably between different colleges and universities. To make Project Advance course work more widely acceptable, students enrolled in Project Advance English, biology, or chemistry are required to take both semesters of these courses.

A slightly different consideration applies in the case of calculus. Here we recommend that students complete *four hours* of Project Advance Self-Paced Calculus if they plan to enroll in a second semester of calculus as a college freshman, or *eight hours* if they plan to enroll in a third-semester course. This allows for some overlap if topics in the calculus sequence are presented in a different sequence at other colleges and universities.

For these reasons, students are encouraged to review courses with their advisers at the college of their choice to determine the relationship of their Project Advance course work to subsequent course requirements.

Demands on Teachers' Time

Project Advance teachers—particularly those in their first year—may find that having students five days a week in a Project Advance class, as well as meeting with their other classes every day, places some severe demands on them, such as returning corrected papers or tape recorded critiques on time and emphasizing individualization in Project Advance courses. One Project Advance teacher put it this way:

It's an extremely demanding program for a teacher in terms of time and energy—far beyond that of a normal teaching load. It's an almost draining experience, but one which I don't regret. The opportunity to work with fellow professionals in other districts has been especially valuable.

Because Project Advance courses generally require extensive time for preparation and direct consultation with students, we strongly recommend Project Advance teachers be relieved of at least a portion of their non-teaching duties to allow for the extra demands upon them and that they be held responsible for no more than three preparations and five classes.

Maintaining Academic Standards

Occasionally, differences may arise between teachers in the high school and Syracuse University faculty members in the application of grading criteria. For the most part, the problems resulting from these situations are minor. They are usually discussed and resolved on a collegial basis. Most of these problems are prevented through summer training workshops, ongoing meetings between Syracuse University and high school faculty, and refresher seminars, all of which enable participants to understand and practice applying the program's academic standards. In the unusual case of pervasive and irreconcilable differences of a serious kind, however, courses may be withdrawn at the option of either the high school or Syracuse University. It may be difficult in such a case to demonstrate to the community that the decisions represented are honest differences without reflecting negatively on either the high school or Syracuse University.

Other Problems

Most of the remaining problems are not so much connected with the program itself as they are a result of the expectations, not always realistic, that students or their parents may have of Project Advance. In this connection, we should emphasize that:

—payment of tuition does not ensure Syracuse University credit
—a student is not automatically granted admission to Syracuse University upon successful completion of a Project Advance course
—the Syracuse University transcript certifies college credit but does not automatically guarantee acceptance at any other institution
—the student's high school transcript does not serve as certification of college credit
—the high school grade for the Project Advance course may not be the same as the University grade (the University grade usually is lower).

Most of these problems are rare and, it would appear, usually idiosyncratic. It is more often the case that the close and frequent contacts between students and the adjunct faculty in the high schools result in an even clearer understanding of program requirements than is typically found on a college campus.

Project Advance Students:

WHO ARE THEY?
HOW DO THEY COMPARE ACADEMICALLY?

Who are the students who typically enroll in Project Advance? What are their personal, social, and academic characteristics? How do they compare to other college-bound students? And, finally, how do students enrolled in Project Advance courses compare in academic performance with college students taking similar courses on campus?

A Profile of Project Advance Students

During the 1974-75 academic year, Project Advance attempted to profile students in the program so that they could be compared with students in other cooperative school-college programs and with college-bound students generally. Information was collected from a sample of 226 students using the Student Descriptive Questionnaire (SDQ) from the College Entrance Examination Board's Admissions Testing Program (ATP). A copy of the complete study is available on request. Highlights are as follows:

—Fifty-five percent of the Project Advance students responding reported a grade point average of 3.5 or better. This average was reported by only 25 percent of college-bound students in New York State generally and by only 26 percent in the United States overall.

—Forty-five percent of the Project Advance students completing the SDQ were in the *top tenth* of their high school class.

—Project Advance respondents had a substantially higher SAT-verbal and SAT-math score than college-bound respondents in New York State or in the United States generally, as indicated in the table below:

1975 College-Bound Seniors Completing the SDQ

	SAT-V	SAT-M
Project Advance	515	561
New York State	441	484
United States	434	472

—As a group, respondents in Project Advance courses had higher educational aspirations than college-bound respondents generally. Sixty percent of the Project Advance students completing the ATP expected to continue study for a graduate or professional degree.

—As a group, Project Advance students in this study were more active in high school clubs and organizations, extracurricular activities, and community and church groups than were college-bound students generally. Proportionately, more Project Advance respondents received high school honors and awards than other college-bound students.

Comparability of Student Academic Performance On and Off Campus

Project Advance has undertaken studies to determine whether students enrolled in Project Advance courses do as well as college students completing the same courses on campus at Syracuse University. In general, it has been found that Project Advance students perform at least as well as, and in some instances, better than their on-campus counterparts. The following are highlights of evaluations in English, psychology, calculus, and sociology. Reprints of the complete reports are available at a nominal charge on request from Project Advance (see page 24).

English

Three English studies were conducted between 1973 and 1976, and were designed to establish whether students enrolled in the Project Advance Freshman English course who received passing grades wrote essays equivalent in quality to those written by students who received credit in freshman English on campus at Syracuse University. Three judges were asked to compare both passing and failing papers written on and off campus. The procedure was conducted once for argumentative essays on general topics and repeated for essays on literature. Judges were not told whether the papers they read were considered passing or failing, or whether the student authors were from Syracuse University or Project Advance.

Findings for each of the three years in which the study was conducted are as follows:

1973-74:

Project Advance argumentative essays were considered better than the corresponding papers written by Syracuse University students. Passing literary essays for Project Advance were equivalent to passing papers on campus.

1974-75:

Argumentative and literary essays written by Project Advance students met the standards applied to passing papers in freshman English at Syracuse University.

Project Advance argumentative essays were better than the corresponding papers written by Syracuse University students.

1975-76:

The comparison of argumentative essays written in Project Advance and at Syracuse University indicates that Project Advance students met, and indeed exceeded, Syracuse University writing standards for argumentative essays.

Passing literary essays at Syracuse University were generally rated above Project Advance passing papers.

A larger-scale study of the freshman English course was conducted during the 1977-78 academic year. Argumentative essays were collected from 145 Project Advance students and 300 Syracuse University students at the beginning and end of the instruction. Eighteen teachers of English, who were not involved in teaching any of the students in the sample, scored the essays for "organization," "development," "quality of thought," "technical control," and "style," and graded the essays "pass" or "fail." Identifying marks were removed from the essays so that the raters would not be able to tell the pre-course essays from the post-course essays, or know the names, classes, or programs of the authors. The inter-rater reliability of this procedure was .74, which is extremely high for studies of this type. The results of this study are as follows:

Project Advance pre- and post-course essays were rated significantly better than Syracuse University essays. The largest differences were found in the criteria of "technical control" and "development." In addition, the percentage of students writing passing essays increased 33% for the Project Advance students versus 20% for the Syracuse University students.

Psychology

The psychology studies were designed to establish the comparability of student performance on and off campus in Psychology 205, Foundations of Human Behavior. In the 1973-74 study, the mid-term examination was selected as the basis for comparison. In the studies conducted the following two years, a comparison between the two groups was made at 10 points throughout the course—a pre-test, post-test, a mid-term, and at the end of each of seven required units.

The overall finding for each of the three years in which a study was conducted was as follows: high school students taking Psychology 205 through Project Advance, and Syracuse University students taking the same course on-campus were equivalent in their overall performance.

Calculus

Student performance in Self-Paced Calculus on and off campus was compared using an eight-item, 132-point final examination administered at the end of the first semester of the 1975-76 academic year. The test was constructed by faculty in the mathematics department at Syracuse University and was scored by six independent judges who had no association with the self-paced course either on campus or in the high schools. Results are as follows:

Project Advance students (mean = 105.69) did slightly better than Syracuse University students in the Self-Paced Calculus course (mean = 99.34) and better than Syracuse University students in a conventionally designed calculus course (mean = 82.26).

Sociology

Comparability of student performance in Sociology 201, Introductory Sociology, was obtained using a 60-item final examination administered at the end of the 1976-77 academic year. Results were as follows:

Project Advance students (mean = 35.1) performed better than Syracuse University students (mean = 32.2). Comparisons between each of the six units on the exam—Theory and Method, Social Structure, Culture, Socialization, Stratification, and Deviance—showed Project Advance students to have significantly higher scores than Syracuse University students in all instances, except for Theory and Method, on which the mean scores were equivalent.

Course Descriptions

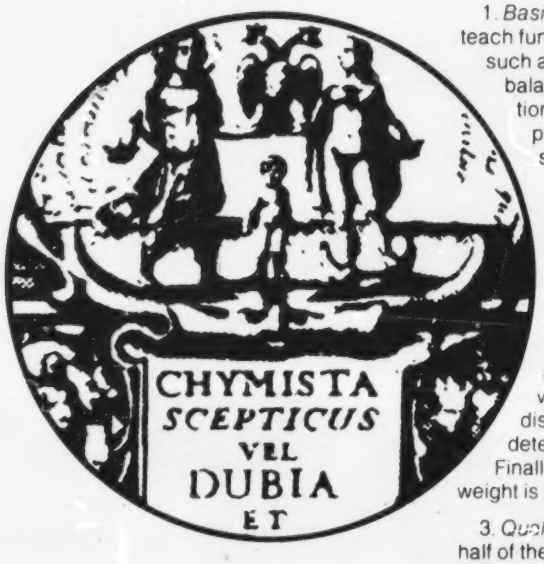
The following descriptions focus on the design and content of Project Advance courses. A more detailed description of each course including required instructional materials and their cost, grading procedures, and expanded discussion of course content and design, is available on request.

Biology 121 and 123 General Biology (4) and (4)

Biology 121-123 is a two-semester, eight-credit-hour self-paced course which introduces students to biological concepts using a variety of instructional techniques, such as audio tapes, film loops, slides, demonstrations, laboratory work, readings, lectures, and discussions. Students attend two formal lecture-discussion periods per week and spend about four hours per week in the audio tape labs. During an audio tape lab session, the student may be asked to carry out an experiment, view a demonstration, interpret experimental results, study prepared slides, complete a dissection, make a drawing to document observations, or complete self-quizzes. Formal lecture-discussion sessions are used mainly to reinforce and extend core subject matter taught via the audio tapes, to discuss text reading assignments, to emphasize the relevance of the subject matter to the student's own life and to society, and to give the student the opportunity to write and talk about the subject matter.

The student is allowed to spend as much time as is needed to complete each unit satisfactorily. Self-quizzes are provided so that the student can determine if he or she has sufficient grasp of the material to proceed to the next instructional unit.

The course consists of the following 18 units presented in sequence: The Microscope and Measurement; A Visit to the Great Barrier Reef; How to Make Sense Out of the Diversity of Life; Evolution and the Past Diversity of Life; Unity of Life and Adaptation; Microscope and the Electron Microscope; The Architecture of Cells; How Substances Get In and Out of Cells; Chemicals of Life: Proteins and Enzymes; Origin of Life; Cell Reproduction; Animal Development; Genetics, Energy and Life; Plant Structure and Function; Animal Structure and Function. Helena Curtis' *Biology* (2nd Edition) published by Worth, is the major text for the course.



Chemistry 106 and 116 General Chemistry Lecture (3) and (3) Chemistry 107 and 117 General Chemistry Laboratory (1) and (1)

Chemistry 106-116, 107-117 spans two semesters consisting of three credit hours of lecture and one credit hour of laboratory per semester. The course is designed to satisfy the general chemistry requirement for a wide variety of pre-professional programs, such as health-related professions (pre-medical, pre-dental, pre-veterinary, etc.), biology, chemistry, engineering, and physics. The student is exposed to a wide range of basic chemical concepts in the classroom portion of the course as a foundation for future academic pursuits.

The lecture portion of the course consists of the following 16 units presented in sequence: Matter, Kinetic Molecular Theory, and Changes in State; Electronic Structure of Atoms; Chemical Bonding and Molecular Structure; Chemical Reactions and Stoichiometry; Energy and Chemical Change; Oxygen; Hydrogen; Solutions, Acids, Bases, and Salts; Redox Reactions and the Electrochemical Series; The Halogens; The Sulfur Family; The Nitrogen Family; Chemical Equilibrium; Electrochemistry; Metals and Metallurgy.

The laboratory portion of the course focuses on basic manipulative skills required for future chemistry laboratory experiences and consists of a series of experiments which focus on three aspects of chemistry:

1. *Basic Skills.* These experiments teach fundamental laboratory skills, such as the use of the analytical balance, evaluation and appreciation of experimental error, correct procedures for titrations, and some experience in assembling and using some simple laboratory apparatus. These experiments are covered in the first half of the first semester.

2. *Synthesis and Identification.* In these experiments, which span the first and second semesters, the student prepares and purifies an inorganic metal complex. The visible and ultraviolet spectra are discussed and the molecular weight determined by several techniques. Finally, a derivative of the molecular weight is prepared and identified.

3. *Qualitative Analysis.* During the last half of the second semester the students carry out an abbreviated qualitative analysis scheme for some common cations. This exercise contributes significantly to that intangible called "laboratory sense."

The major text used for the course is *Chemistry* (3rd Edition) by Charles E. Mortimer, published by VanNostrand.

English 101 and 102 Basic Freshman English (3) and (3)

Freshman English 101-102 is a six-credit, flexible-paced course in writing and critical reading designed to meet specific individual needs while permitting the student to complete his/her entire freshman English requirement.

In the initial one-credit unit, students write in-class argumentative essays on general topics for a period of two to 12 weeks, depending on how long each student takes to demonstrate organizational and technical competence in this mode. Students next write at least 1,500 words in two or more prepared papers on how imagery, structure, or tone works in poetry (for one credit). For most students, these three units correspond to the first semester, although some students move through them at a faster or slower pace.

The remaining three units, which for most students correspond to the second semester, include one or two minicourses on various topics, usually literary in character, each credit hour requiring at least 1,500 words in two or more prepared papers. Students complete the course by writing one or two research papers, generally on literary topics, each 2,000 words for one credit hour. The emphasis in all units of the course is on maintaining and building on the level of writing competence required to pass the initial unit. Sheridan Baker's *The Practical Stylist* (3rd Edition) published by Crowell, Edgar Roberts' *Writing Themes About Literature* (4th Edition) published by Prentice-Hall, and Conley and Cherry's *Poems for Comparison and Contrast*, published by Macmillan, are among the list of required texts.

Psychology 205 Foundations of Human Behavior (3)

Psychology 205 is a one-semester, three-credit-hour offering which aims: 1) to provide a strong foundation in basic principles for understanding the behavior of humans and subhuman species; 2) to provide students with a basis for deciding whether or not to take future course work in psychology; and 3) to help students gain insight into their own behavior and its relationship to and interaction with the environment.

The course is divided into two parts. The first consists of eight required units (or blocks of material) which cover basic areas common to most introductory psychology courses (e.g., scientific method, classical conditioning, operant conditioning, physiological, personality, abnormal behavior, child development, and social behavior). The other half of the course consists of optional reading in a variety of supplementary topics (e.g., hypnosis, memory, behavioral disorders of children, and personality assessment). Thus, students are exposed to the basic areas as well as allowed to select from other topics, depending upon individual goals or interests. To aid the student, each unit has 20-30 study guide questions which direct attention to some of the primary points in the material. Students are encouraged to answer these before taking an examination. The course format is a variation on the Keller self-paced method of instruction. At the end of each required unit, the student takes an objective multiple-choice examination and is required to score at least 80% to earn credit for the unit. All subsequent exams on required units and all optional units are given and graded individually by the instructor.

Although the course structure is essentially self-paced, the exam scheduling is left to the discretion of the individual teacher. This allows the teacher the flexibility to provide some structure by scheduling some examinations during class hours and setting aside some class time or other hours for individual students' optional work and tutoring. In contrast to traditional courses which use one textbook, the modules in this course comprise a variety of materials which have been selected from several sources.

Religion 105 and 106 Introduction to the Study of Religion (3) and (3)

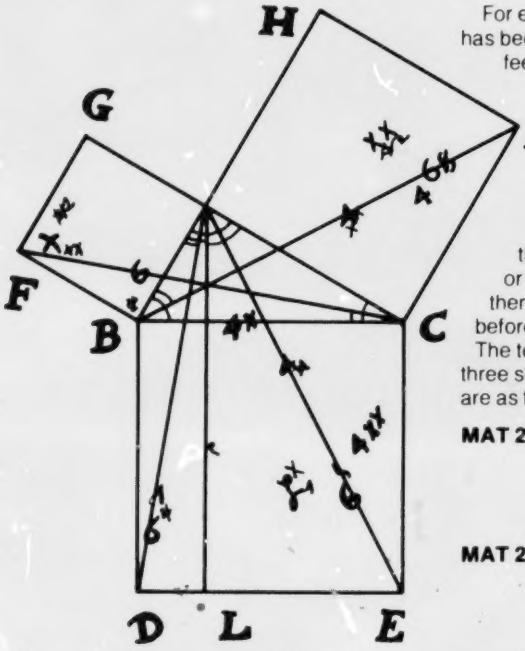
Religion 105-106 represents a major departure from traditional introductory religion courses. Instead of comparing specific religions (e.g., Catholicism, Judaism, Buddhism), the course provides the student with a broad perception of religion as a field of study. The student, moreover, is offered a series of options which allows him or her to select the subject matter of greatest interest. The course itself may be taken for three credits or from three to six credits.

Although the design of the course may vary from school to school, certain elements will be consistent. All students are required to complete a short, two-to-three week introductory unit which combines independent learning assignments (programmed booklets) and seminars. The topics covered include the development of a working definition of the term *religion* and both a discussion of religion as a field of study and an examination of the criteria for using specific data in this study. Students are required to pass a criterion test before moving out of this unit.

The remaining portion of the course is divided into three broad areas—Forms of Religious Expression (the ways in which people attempt to communicate their religious experiences), Religious Issues (the questions and concerns that grow out of these experiences), and Methodology (the methods that can be used to investigate and interpret religious data). Students are required to study at least one of the options available under each of these categories.

While as many as five options are available in a category, the cooperating teacher may limit a student's choice to those options which reflect the teacher's own content area, strengths, and interests. Some options rely heavily on class discussion and individual conferences with the students; others emphasize independent study.

The basic text for this course is *Introduction to the Study of Religion*, edited by T. William Hall (Harper & Row, 1978).



Self-Paced Calculus MATH 295 (3), MATH 296 (3), MATH 397 (3)

The calculus sequence is designed to allow for different learning speeds and yet permit students to achieve a high mastery of the content. Students may earn up to nine credit hours over a period of three semesters (this is the only Project Advance course in which a high school student may, with special permission, enroll during the junior year).

The goal of Self-Paced Calculus is to permit students to master the material covered in a standard college calculus course at a pace most comfortable to them. The subject matter has been divided into units (or blocks of material) which typically take about one week to cover and learn thoroughly. The student uses a standard calculus textbook, A. W. Goodman's *Analytic Geometry and Calculus* (Macmillan, 3rd Edition), and a set of detailed study guides coordinated with the text to learn the material in each unit. Regularly scheduled tutorial periods are also available for individual help as needed. Teachers may schedule lectures and problem-solving sessions or may depend upon one-to-one tutorial sessions, whichever type of instruction is most suitable. Programmed booklets are employed in two units.

For each unit a series of parallel tests has been prepared. When the student feels that he or she has mastered the material in a unit, he or she may request a test for that particular unit. If the test is passed at a prespecified level of mastery, the student may begin to prepare for the next unit. If the test is not passed, the student is given tutorial help or a remedial assignment and must then pass another version of the test before proceeding to the next unit.

The topics covered during each of the three semesters of Self-Paced Calculus are as follows:

MAT 295: Introductory analytic geometry, limits, derivations, maximum-minimum, related roots, graphs, differentials, mean-value theorems.

MAT 296: Integration, the definite integral and applications, trigonometric, logarithmic and exponential functions, methods of integration.

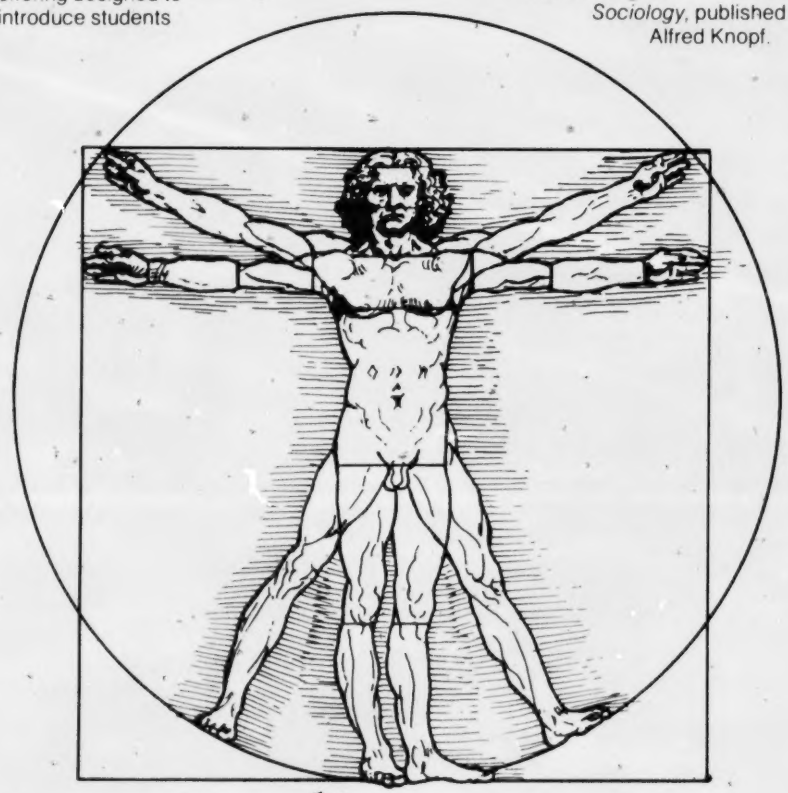
MAT 397: Vectors, parametric equations, polar coordinates, L'Hopital's rule, improper integrals, infinite series, elementary differential equations.

Sociology 101 Introduction to Sociology (3)

Sociology 101 is a one-semester offering designed to introduce students to the basic concepts and tools of contemporary sociology and to foster the development of a sociological imagination.

The course is organized into five units: the first introduces the student to major orienting questions, central theoretical perspectives, and kinds of methodological tools employed in sociology; the second introduces central concepts of structural sociology by focusing on the notion of society as a social system and by examining society's structure and function, and methods for allocating power and resources; the third unit applies the concepts of structural sociology to substantive issues such as population and health, urban life and technology, and organization and bureaucracy; the fourth unit deals with major concepts of interpretive sociology, discussing culture, socialization, deviance, and collective behavior (the focus is on how individuals develop a social self and live in a culture of beliefs and ideas which come to be perceived as realities); and the fifth unit applies the concepts of interpretive sociology to an understanding of the substantive issues of cultural minorities, sex roles, the family, religion, and education. The overall objective of the course is to present an integrated model of sociology that includes both structural and interpretive dimensions while not losing sight of lively debates which define contemporary sociology as a still emerging discipline.

The primary textbook used in the course is Light and Keller's *Sociology*, published by Alfred Knopf.



Participating High Schools and Course Offerings 1978-79

The following is a list of high schools currently participating in the program and their anticipated course offerings. Individuals seeking information about Project Advance are encouraged to call upon faculty and school principals in their area to explain the program in more detail.

High Schools (Principals)	Courses*	Address	Telephone
Adams (Comstock, Jack)	E	3200 W. Tienken Ave. Rochester, MI 48063	(313) 652-0116
Andover (Thieleke, Gene)	E	4200 Andover Rd. Bloomfield Hills, MI 48013	(313) 647-1224
Ardsley (Figlia, Thomas)	C/E	300 Old Farm Rd. Ardsley, NY 10502	(914) 693-6300
Athens (McGregor, John)	E	4333 John Rd. Troy, MI 48084	(313) 524-1200
Auburn (Orofino, Michael)	S/P	Lake Avenue Auburn, NY 13021	(315) 253-0391
Berkley (Blaney, George)	E	2325 Catalpa Dr. Berkley, MI 48072	(313) 548-1200
Birdlebough (Castiglione, Vincent)	E	470 Main Street Phoenix, NY 13135	(315) 695-1531
Bishop Grimes (Sr. Mary Agnes)	E	6653 Kirkville Rd. East Syracuse, NY 13057	(315) 437-0356
Brentwood (Yankowski, Stanley)	E/S/Cm	Third Avenue Brentwood, NY 11717	(516) 435-2424
Briarcliff (Troy, Joseph)	E	Pleasantville Road Briarcliff Manor, NY 10510	(914) 769-9400
Camden (Day, James)	E	Oswego Street Camden, NY 13316	(315) 245-2500
Carle Place (Leitman, Edward)	E/P	Cherry Lane Carle Place, NY 11514	(516) 334-1900
Catskill (Holland, Lawrence)	E	West Main Street Catskill, NY 12414	(518) 943-2300
Cazenovia (Murphy, Charles)	E	Green Street Cazenovia, NY 13035	(315) 655-3444
Chittenango Central (Talbot, Harold)	E/B	Genesee Street Chittenango, NY 13037	(315) 687-7172
Clinton (Perretta, Frank)	E	Clinton, NY 13323	(315) 853-5574
Cold Spring Harbor (Wetterer, Charles)	P	Turkey Lane Cold Spring Harbor, NY 11724	(516) 692-8600

*E = English, P = Psychology, B = Biology, Cm = Chemistry, S = Sociology, C= Calculus, R = Religion.
**Teachers have been certified in subject but course is not currently being offered.

High Schools (Principals)	Courses*	Address	Telephone
Colonie (Croder, Bruce)	S	100 Hackett Ave. Albany, NY 12205	(518) 459-1220
Corcoran (Hershberger, Gordon)	E/B	919 Glenwood Ave. Syracuse, NY 13207	(315) 425-4321
Deer Park (Peltz, Filmore)	E/P/C/S	30 Rockaway Ave. Deer Park, NY 11778	(516) 242-6548
Dobbs Ferry (Ruck, Jack)	C/E/B	Broadway Dobbs Ferry, NY 10522	(914) 693-1500
East Hampton (Sarlo, Christopher)	E/C/B	2 Long Lane East Hampton, NY 11937	(516) 324-4100
East Syracuse-Minoa (Vona, John)	E/P/C/S	Fremont Road East Syracuse, NY 13057	(315) 656-7242
Fayetteville-Manlius (Wheeler, Piatt)	E/P/C/S	Seneca Turnpike Manlius, NY 13104	(315) 682-6126
Glens Falls (Easson, Graham)	C	Quade Street Glens Falls, NY 12801	(518) 792-6564
Groves (Rolph, Ronald)	E**	20500 W. Thirteen Mile Rd. Birmingham, MI 48010	(313) 644-9300
Guilderland (Ciaccio, Charles)	E/S/B	Guilderland Center, NY 12084	(518) 861-8591
Harborfields (Waxman, Eric)	E	Taylor Ave. Greenlawn, NY 11740	(516) 261-4900
Harrison (Meyer, Kenneth)	E	Union Ave. Harrison, NY 10528	(914) 835-3300
Hastings (Raad, Emil)	C	Hastings-on-Hudson, NY 10706	(914) 478-2900
Hauppauge (Suprina, Richard)	E/P	Townline Rd. Hauppauge, NY 11787	(516) 265-3630
Henninger (Spadafora, Patrick)	E/P/S/B	600 Robinson Street Syracuse, NY 13206	(315) 425-4343
Herricks (Guglielmone, Tito)	E	Shelter Rock Road New Hyde Park, NY 11040	(516) 741-7800
Jamesville-Dewitt (Capone, Robert)	E/P/C/R/Cm**/S	Maple Drive Dewitt, NY 13214	(315) 446-0233
Jericho (McKee, Paul)	P/S	Route 107 Jericho, NY 11753	(516) 681-6620
Kings Park (Bickford, Joseph)	E/C	Route 25A Kings Park, NY 11754	(516) 269-6000
Lafayette (Graney, Robert)	E/C/S	Lafayette, NY 13084	(315) 677-3131
Lahser (Vartanian, Michael)	E	3456 Lahser Rd. Bloomfield Hills, MI 48013	(313) 338-0311
Lincoln-Sudbury (Levington, David)	E/C**	390 Lincoln Road Sudbury, MA 01776	(617) 443-9961

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High Schools (Principals)	Courses*	Address	Telephone
Liverpool (Kidd, David) (Carhart, David—House I) (Luttinger, William—House II) (Conners, William—House III) (Apking, Raymond—House IV)	E/P/B/Cm	Wetzel Road Liverpool, NY 13088	(315) 652-1300
Manhasset (McGregor, Warren)	E/P/C/B/S	Manhasset, NY 11030	(516) 627-4400
Marlborough (Landers, Donald)	E	Bolton Street Marlborough, MA 01752	(617) 485-8100
Maryvale (Davis, Stewart)	P	1050 Maryvale Drive Cheektowaga, NY 14254	(716) 633-9770
Maslow-Toffler (Follansbee, Conrad)	P/S	Paradise Lane Brentwood, NY 11717	(516) 435-2237
Minuteman (Fitzgerald, Ronald)	E	758 Marrett Rd. Lexington, MA 02173	(617) 861-6500
Moravia (MacGregor, Daniel)	E/C/Cm**	Main Street Moravia, NY 13118	(315) 497-2670
New Paltz (Salenger, Kenneth)	E	South Putt Corners Rd. New Paltz, NY 12561	(914) 255-1300
Northport (Lawrence, Peter)	E	Laurel Hill Road Northport, NY 11787	(516) 261-9000
North Rose-Wolcott (Woods, Theodore)	E	Salter-Colvin Road Wolcott, NY 14590	(315) 594-8051
Norwich (Preuss, Paul)	E/C/S	Midland Drive Norwich, NY 13815	(607) 334-3211
Nottingham (Daniszewski, Joseph)	E/P/S/B	3100 E. Genesee Street Syracuse, NY 13224	(315) 425-4380
Oneida (Blehar, Ted)	E	Seneca Street Oneida, NY 13421	(315) 363-6901
Ossining (Toll, Stanley)	C	29 South Highland Ave. Ossining, NY 10562	(914) 941-7700
Otselic Valley Central (Lesick, Michael)	B	Maple Avenue South Otselic, NY 13155	(315) 653-4431
Pawling (Goodhart, David)	E/C	Reservoir Road Pawling, NY 12564	(914) 855-1620
Pearl River (Riker, E. T.)	E/P	Central Ave. Pearl River, NY 10965	(914) 735-3131
Pleasantville (Fulton, Thomas)	E	Romer Avenue Pleasantville, NY 10570	(914) 769-8000
Port Chester (Napoli, Anthony)	E	Tamarack Road Port Chester, NY 10573	(914) 939-7300
Port Jervis (DeCaprio, Patrick)	E/C/P	Route 209 Port Jervis, NY 12771	(914) 856-1465
P. V. Moore (Miller, Robert)	E/B	Caughdenoy Road Central Square, NY 13036	(315) 668-2611

High Schools (Principals)	Courses*	Address	Telephone
Ramapo (Jacobs, Howard)	E/P/S	400 Viola Road Spring Valley, NY 10977	(914) 356-4100
Rochester (Drue, James)	E**	180 S. Livernois Road Rochester, MI 48063	(313) 651-5590
Rome Free Academy (Valerie, Richard)	E	Rome, NY 13440	(315) 338-3011
Rondout Valley (Vertucci, James)	E/C	Kyserike Road Stone Ridge, NY 12484	(914) 687-7631
Roosevelt (Watkins, James)	E	1 Wagner Ave. Roosevelt, NY 11575	(516) 378-7302
Rye (Carpenter, John)	E	Parsons Street Rye, NY 10580	(914) 976-6100
St. Saviour (Sr. M. Monica)	E/P/C/S	588 Sixth Street Brooklyn, NY 11215	(212) 768-4406
Schreiber (Killeen, Gerald)	P	101 Campus Drive Port Washington, NY 11050	(516) 883-4120
Seaholm (Schulz, John)	E**	2436 W. Lincoln Road Birmingham, MI 48009	(313) 644-9300
Shenendehowa (Amlaw, Leonard)	P/S	Box 58 Elnora, NY 12065	(518) 371-6000
Solvay (O'Donnell, Robert)	E	Gertrude Street Solvay, NY 13209	(315) 468-2551
Spring Valley (Caplan, Bert)	E/P/S	Route 59 Spring Valley, NY 10977	(914) 356-4100
Suffern (Neff, Charles)	P	Mile and Viola Roads Suffern, NY 10901	(914) 357-3800
Troy (Toma, John)	E	3179 Livernois Road Troy, MI 48084	(313) 689-0644
Vernon-Verona-Sherrill (Morgan, Thomas)	E	Verona, NY 13419	(315) 363-4200
Wantagh (Slattery, Matthew)	P/S	Beltagh Ave. Wantagh, NY 11793	(516) 781-8000
West Genesee (Ohl, Clyde)	E/P/C/S	5201 W. Genesee Street Camillus, NY 13031	(315) 487-4601
Westhill (Haws, William)	E/P/B	4501 Onondaga Blvd. Syracuse, NY 13219	(315) 475-1621
Westlake (Boffardi, Louis)	E/C	Westlake Drive Thornwood, NY 10594	(914) 769-8313
The Wheatley School (Wathey, Walter)	E	11 Bacon Road Old Wesbury, NY 11568	(516) 334-8020
Woodlands (Gray, Lorraine)	C	Warburg Campus Hartsdale, NY 10710	(914) 761-6000
Xaverian (Bro. Kyrin Powers)	E/P/C/R/B	7100 Shore Road Brooklyn, NY 11209	(212) 836-7100

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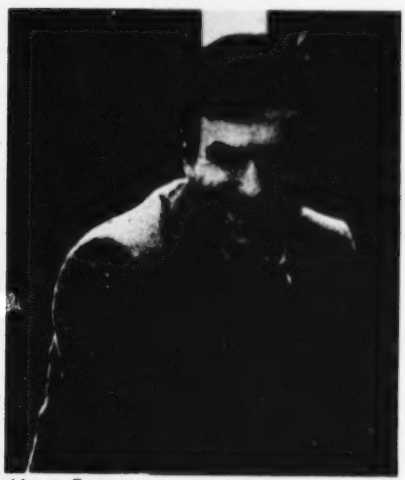
Project Advance Faculty and Administrative Staff

Faculty

Project Advance employs regular Syracuse University faculty members on a part-time basis in the subject areas of biology, calculus, chemistry, English, psychology, sociology, and religion. Their relationship to Project Advance has been discussed elsewhere in this catalog, particularly in the sections entitled "Selecting and Training Teachers" (page 6), and "Maintaining College Standards (page 7). They serve primarily in a collaborative, supervisory role with Project Advance teachers to ensure that college standards are maintained within the courses taught in the high schools, and assist in the on-going development and evaluation of courses both on and off campus.



Marvin Druger

Biology

Marvin Druger
Ph.D., Columbia University, 1961 (Biology)
Professor of Science Education and Biology (Dual Appointment)
Dr. Druger joined the Syracuse faculty in 1962. He teaches the general biology course in which he has developed a multi-method approach involving audio tapes, films, discussions, lectures, and laboratory. This is the same course offered to Project Advance students off-campus. He is particularly interested in individualizing instruction, teacher education and curriculum development. Dr. Druger's research interests include evolutionary genetics, maintenance of polymorphism in populations, and selection and fitness in varying environments. He is widely published, and is the author of the Addison-Wesley *Individualized Biology Series*.

Calculus

Karl F. Barth
Ph.D., Rice University, 1964 (Mathematics)
Professor of Mathematics
Dr. Barth assisted with the development of the Project Advance self-paced calculus course, and works with Project Advance high school teachers through on-site visits and in-service workshops. His research interests are in the area of boundary behavior of functions holomorphic in the unit disk, approximation theory, entire functions, and potential theory. He is the author of more than 20 papers which have appeared in mathematics journals throughout the world, and spent the 1975-76 academic year in London as a Senior Visiting Fellow of the British Science Research Council.

Guy Johnson
Ph.D., Rice University, 1955 (Mathematics)
Professor of Mathematics
Dr. Johnson's research interests are in complex analysis, potential theory, and mathematical physics. He has spent sabbatical leaves at CERN in Switzerland, University of Colorado, University of Illinois, and Stanford University. He also assisted in the development of the Project Advance self-paced calculus course.

June Whitehead
M.S., University of Illinois, 1948 (Mathematics)
Instructor, Mathematics
Ms. Whitehead has been with the mathematics department at Syracuse since 1960, having taught a wide variety of undergraduate courses, with emphasis on calculus and higher geometry. She participated in the development of the Project Advance self-paced calculus sequence and has developed other self-paced courses for the math department. She is chairman of the Mathematics Department Undergraduate Committee, and is currently studying in the field of secondary mathematics education.

David L. Williams
Ph.D., University of Michigan, 1967 (Mathematics)
Associate Professor of Mathematics
Dr. Williams joined the faculty of Syracuse University in 1967. His research deals with problems in complex analysis, harmonic analysis, and functional analysis. He has published a number of research papers in these fields. He co-authored the material for the self-paced calculus course at Syracuse University which is also used in the Project Advance calculus course.

Chemistry

Jack R. Vriesenga
Ph.D., Purdue University, 1968 (Chemistry)
Associate Professor of Chemistry
Dr. Vriesenga's research is in the area of inorganic reaction mechanisms and new synthetic techniques for preparing chromium (III) complexes. He is active in teaching introductory level chemistry, and is responsible for the development of the Project Advance chemistry course.

English

Randall Brune
Ph.D., Syracuse University, 1963 (English)
Director of Freshman English, Professor of English
Dr. Brune was co-designer of the first Project Advance course in 1973. He has been Director of Freshman English at Syracuse University since 1965 and also teaches undergraduate and graduate courses in British literature of the nineteenth and twentieth centuries. He offers freshman minicourses in literature on the theme of Evolution, on Response to Nature, and on Sherlock Holmes. He has edited a freshman reader, published articles on Wordsworth and T. S. Eliot, and has done research in England on the Romantic poets.

Randall Brune

Peter DeBlois
M.A., Syracuse University, 1971 (English)
Assistant Director of Freshman English
Mr. DeBlois has been Assistant Director of Freshman English at Syracuse University since 1974. He has taught English at Illinois State University, Onondaga Community College, and Empire State College, as well as at Syracuse University. In addition to helping administer the freshman English program at Syracuse, he has helped develop English testing and evaluation procedures for incoming freshmen, and has edited self-paced instructional materials in English and psychology for Project Advance and the Center for Instructional Development. His special interests are in the history and theory of rhetoric and composition and eighteenth-century British literature. His doctoral thesis is on rhetorical invention and teaching composition.

Psychology

James R. Sutterer
Ph.D., University of North Carolina at Chapel Hill, 1970 (Experimental Psychology)
Associate Professor of Psychology
Dr. Sutterer's published research covers a broad range of basic behavioral processes including classical conditioning of affect in humans, student behavior in self-paced courses, basic learning phenomena, and cardiovascular responses to stressful environments. His current research which is supported by the American Heart Association focuses on the etiological significance of coping with stress on the development of hypertension. In addition to introductory psychology, Dr. Sutterer teaches an animal learning course and a new course dealing with stress and health and disease in humans and animals. Dr. Sutterer is actively involved with the development of Project Advance psychology.

Religion

Ronald R. Cavanagh
Ph.D., Graduate Theological Union, 1968 (Philosophy of Religion)
Associate Professor of Religion
Dr. Cavanagh was charged with the design of Introduction to the Study of Religion, a course serving both Project Advance students and Syracuse University freshmen. He is a major contributor to *Introduction to the Study of Religion*, and is chairman of the Religion Department.

Sociology

Gary Spencer
Ph.D., Boston University, 1969 (Sociology)
Associate Professor of Sociology
Prior to coming to Syracuse in 1973, Dr. Spencer taught sociology and social psychiatry at the University of Florida, was Assistant Director of Institutional Research with the U.S. Military Academy at West Point, and was adjunct Assistant Professor of Sociology in Education with Teachers College, Columbia University. He has published numerous books and articles in his field, and is under contract to Allyn and Bacon for the completion of *Contemporary Sociology Theory: Framework and Exemplars*. He has been actively involved in the development of the Project Advance sociology course, and is currently chairman of the Sociology Department within the Maxwell School at Syracuse.

Administrative Staff

Robert M. Diamond
Ph.D., New York University, 1962 (Educational Communications)
Assistant Vice Chancellor for Instructional Development and Director of the Center for Instructional Development; Professor of Instructional Technology
Dr. Diamond came to Syracuse University in 1971. He is responsible, in collaboration with University faculty and departments, for a major effort to improve the quality and effectiveness of the academic program of the University. Dr. Diamond was instrumental in the conceptualization and design of Project Advance in its early stages in 1973. His publications include *A Guide to Instructional Television*, *The Amateur Psychologist's Dictionary* (co-author), and *Instructional Development for Individualized Learning in Higher Education*.

Bette C. Gaines
M.S., Syracuse University, 1973 (English Education)
Associate in Development, Project Advance; Adjunct Instructor, Supervisor, Department of English
A member of the Project Advance staff since 1974, Ms. Gaines helps to administer the SUPA Freshman English program, instructs teacher training workshops, and has developed instructional materials.

Bette Gaines

She also teaches freshman English on campus and has assisted in the evaluation of the English program. Before coming to Syracuse, she taught English in high school for 10 years, including Advanced Placement and Project Advance English. Ms. Gaines has also been a consultant at various colleges and public school districts in evaluating English curricula and developing writing programs.

Joanne Garfield

M.Ed., Idaho State University, 1975 (Curriculum and Supervision)
Evaluation Intern, Project Advance; Doctoral Student, Area of Instructional Technology

Ms. Garfield comes to Project Advance as a doctoral student in Instructional Technology, and, as an evaluation intern, will assist with much of the on-going evaluation of Project Advance activities. Prior to joining Project Advance, she acted as administrative assistant to the Project Director of an international contract providing technical training and assistance to the government of Indonesia, and before that taught elementary mathematics for two years. In addition, she has served as a consultant in the preparation of proposals and in the development and revision of training materials for use in various settings.

Robert E. Holloway

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Dr. Holloway joined Syracuse University in the establishment of the Center for Instructional Development in 1971. He has also taught at elementary, high school, and undergraduate levels. Currently he is offering seminars in instructional design and dissemination of innovations at the graduate level. He is the course developer for three Project Advance offerings (calculus, psychology, sociology) and has administrative responsibility for the overall program. His most recent publication, with Drs. Chapman and Kelly, is "Using Student Ratings of Teacher and Course to Predict Achievers."

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One of the authors of the 1973 *Freshman English Student Manual*, Mr. LaFay has been an associate in development with the Center for Instructional Development, working with faculty to redesign university courses, writing English diagnostic and criterion tests; editing instructional materials, and consulting at various colleges, universities, and professional conferences. He has taught English at Syracuse University and at LeMoyne College. His most recent publication, co-authored with Franklin Wilbur, is "The Transferability of College Credit Earned During High School: An Update," *College and University*, fall, 1978.

Franklin P. Wilbur

Joseph A. Mercurio

Joseph A. Mercurio

Ph.D., Syracuse University, 1971 (Education)
Associate in Development, Project Advance

Prior to joining Project Advance in 1977, Dr. Mercurio was a program evaluator with Syracuse University Research Corporation, a Lecturer in Education with the University of Otago in New Zealand, Assistant to the Dean of the School of Education at Syracuse University; and a high school mathematics teacher. He is interested in the methodology of participant observation and its application to the study of institutional and educational settings. His publications include numerous articles on the subjects of adolescence, schools in change, and corporal punishment. He is the author of *Caning: Educational Ritual*, a unique sociological study of corporal punishment in a boys' high school in New Zealand.

Franklin P. Wilbur

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Dr. Wilbur joined the staff of Syracuse University's Center for Instructional Development in 1972. Since that time, he has worked in course design, evaluation, and faculty development both on campus and in Project Advance high schools. He has served as a consultant in education, industry, and government. He is an active member of several organizations including AECT, AERA, PDK, and the National Association of Secondary School Principals. His most recent major publication is *College Courses in the High School* with D. W. Chapman.

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*Published by the Center for Instructional Development, Syracuse University, Syracuse, New York 13210. Reprints of Research Reports are available at a nominal charge on request from Project Advance.